

# LESSON PLAN

**SECTION** : MARINE

**LESSON TITLE** : LAUNCH AND RECOVERY

**TRAINEE LEVEL** : BASIC

**OBJECTIVES** : Upon completion of this class the trainee will be able to:

1. complete a tour inspection of the boat and trailer.
2. demonstrate the proper hook up and tow procedure.
3. properly launch and recover the vessel.
4. perform the post recovery clean up of the vessel.

**METHOD OF INSTRUCTION** : Lecture and Demonstration

**TRAINING AIDS** : Overheads, Chalk Board

**CLASSROOM REQUIREMENT** : Boat, Trailer, Overhead Projector

**TIME** : 16 hours

**REFERENCES** : Boston Whaler |Owner's Manual, OMC Instructions; 25' Challenger Operation's Manual, OMC Operations and Maintenance \manual

**PREPARED BY** : William Oorbeek

**DATE:** 1/06/94

**APPROVED BY** :

**DATE:**

\_\_\_\_\_  
SIGNATURE

## **I. INTRODUCTION**

**NAME, BACKGROUND, TRAINING, EXPERIENCE**

## **II. MOTIVATION**

For you to do your job as a coxswain or crew member aboard a Port Authority rescue boat effectively, you must be sure that your equipment is in order. Once this has been accomplished you must be able to launch and recover your vessel in a safe and effective manner.

## **III. STATEMENT OF OBJECTIVES**

Upon completion of this section the trainee will be able to:

1. properly complete a tour inspection of the boat and trailer
2. demonstrate the proper hook up and tow procedure
3. properly launch and recover the vessel
4. complete a post recovery clean up

**I. Tour Inspections**

A. At the commencement of each tour the Police Officer responsible to launch the water rescue vessel must note location of boat and inspect the Boat, Tow vehicle and Trailer as follows;

**1. Boat Inspections -Exterior**

(fir.1-1A)

a. Walk around boat and visually inspect the following;

- Hull damage if any and location.
- Motors raised
- Extention cord connected to boat battery charger and operable AC outlet.
- Boat batteries fully charged or charging.
- Mast folded down and secured.
- Check drain plugs

**2. Boat Inspections- Interior**

a. Climb aboard boat and perform the following checks;

- Identify location of dead-man clip and pilot house keys.
- Fuel level (gas as needed)
- Oil level
- Safety equipment aboard such as;
  - . flotation devices

DAILY INSPECTION CHECK LIST

BOAT EXTERIOR

HULL DAMAGE note: \_\_\_\_\_

MOTORS RAISED \_\_\_\_\_  
FUEL FULL \_\_\_\_\_ OIL FULL \_\_\_\_\_  
DRAIN PLUGS \_\_\_\_\_ MAST DOWN \_\_\_\_\_  
BATTERIES CHARGED \_\_\_\_\_ HATCH SECURE \_\_\_\_\_

BOAT INTERIOR

PILOT HOUSE KEYS _____	LIGHTS
	docking _____
	floods (p&s) _____
BOOK BOX (CONTAINING)	spots (p&s) _____
charts _____	strobe _____
log book _____	deck _____
manual _____	
	DEPTH FINDER _____
RADIO CHECK	
all fax _____	BOAT HOOK _____
ground ctr _____	
marine _____	PADDLES _____
P.A. SYSTEM _____	DEAD MAN CLIP _____
SIRENS _____	FIRE EXT. _____
BINOCULARS _____	BLANKETS _____
NIGHT GLASSES _____	FOUL WEATHER GEAR _____
FLARE GUN _____	LIFE RINGS _____
AIR HORN _____	P.F.D.'S (crew) _____
TOOL BOX _____	P.F.D.'S _____
FIRST AID KIT _____	SURVIVAL SUITS _____
LADDER _____	FENDERS _____
ANCHOR & LINE _____	FLASH LIGHTS _____
1/2 MILE LIGHT _____	RESCUE HARNESS _____
SAFETY BELT _____	

PERFORMED BY \_\_\_\_\_ DATE \_\_\_/\_\_\_/\_\_\_

CREW CHIEF SGT. \_\_\_\_\_

DAILY CHECK  
EMERGENCY RESCUE BOAT

INTERIOR

- |                          |                         |                          |                    |
|--------------------------|-------------------------|--------------------------|--------------------|
| <input type="checkbox"/> | Battery Chg. Elec. Line | <input type="checkbox"/> | Turn On All Lights |
| <input type="checkbox"/> | All Fax Radio           | <input type="checkbox"/> | Heater             |
| <input type="checkbox"/> | Ground Control Radio    | <input type="checkbox"/> | Radar              |
| <input type="checkbox"/> | Marine Radio            | <input type="checkbox"/> | G.P.S.             |
| <input type="checkbox"/> | Depthfinder             | <input type="checkbox"/> | Compass            |
| <input type="checkbox"/> | Air Horn                | <input type="checkbox"/> | Windshield Wipers  |

EXTERIOR

- |                          |                             |                          |                        |
|--------------------------|-----------------------------|--------------------------|------------------------|
| <input type="checkbox"/> | Fuel - Fill When Needed     | <input type="checkbox"/> | Oil - Fill When Needed |
| <input type="checkbox"/> | Docking Lights              | <input type="checkbox"/> | Tie Down [when app]    |
| <input type="checkbox"/> | Flood Lights                | <input type="checkbox"/> | Mast Down [when app]   |
| <input type="checkbox"/> | Spot Lights                 | <input type="checkbox"/> | Drain Plugs            |
| <input type="checkbox"/> | Deck Lights                 | <input type="checkbox"/> | Motors Raised          |
| <input type="checkbox"/> | Engine Tilt Lock [when app] | <input type="checkbox"/> | EPIRB 1                |

ENGINE DAMAGE \_\_\_\_\_

HULL DAMAGE \_\_\_\_\_

PERFORMED BY \_\_\_\_\_ DATE \_\_\_/\_\_\_/\_\_\_

CREW CHIEF SGT. \_\_\_\_\_ DATE \_\_\_/\_\_\_/\_\_\_

(fig. 1A)

**Instructor Notes:**

**Content Activity:**

PFD'S  
life rings

- . air horn
- . flare gun
- . flashlights and batteries
- . ample docking lines

- All hatches and equipment secured.

- Unauthorized and/or unnecessary equipment removed.

- Radio and navigational equipment check.

- .all fax radio
- .ground control radio
- .marine radio
- .radar
- .charts
- .depth finder
- .globe nav. system

- Boat drain plugs check

- Battery Charger light check in electrical closet.

- Log book

- Binoculars

- Fire extinguisher

- Foul weather gear

- Paddles

- Boat hook and ladder

- Anchor and line

- Survival suits

Instructor Notes:

Content Activity:

- First aid kits
- Fenders
- Tool box
- Blankets
- Swimmers harness
- Night glasses
- \_ Safety belt

**3. Tow Vehicle Inspection**

a. Vehicle assigned as tow vehicle, location and keys to same.

b. Walk-around visual inspection to include;(FIG. 2)

- vehicle damage
- tires
- hitch
- mirrors
- electrical connection port for winch
- electrical connection port for trailer lights

c. Interior checks to include;

- fuel level
- radio checks
- emergency lighting
- flood lighting for night launch and/or recovery
- Vehicle lighting and turn indicators
- ignition system and

DAILY INSPECTION CHECK LIST

TRAILERING VEHICLE

VEHICLE # \_\_\_\_\_

VEHICLE DAMAGE

NOTE: \_\_\_\_\_

FUEL LEVEL \_\_\_\_\_

TIRE TREAD SATISFACTORY \_\_\_\_\_

TIRES CORRECTLY INFLATED \_\_\_\_\_

ENGINE START/STOP \_\_\_\_\_

BRAKES OK \_\_\_\_\_

GAUGES NORMAL \_\_\_\_\_

NOTE: \_\_\_\_\_

LIGHTS;  
flood \_\_\_\_\_  
turn indicators \_\_\_\_\_  
head light etc.. \_\_\_\_\_  
emerg.(360 dg.) \_\_\_\_\_

ELECTRICAL CONNECTORS  
winch \_\_\_\_\_  
trailer lights \_\_\_\_\_

RADIO CHECKS  
ground ctr. \_\_\_\_\_  
all fax \_\_\_\_\_

HITCH \_\_\_\_\_

PINTLE HOOK SECURE \_\_\_\_\_

ADJ. MIRRORS \_\_\_\_\_

PERFORMED BY \_\_\_\_\_ DATE \_\_\_/\_\_\_/\_\_\_

CREW CHIEF SGT. \_\_\_\_\_

**Instructor Notes:**

**Content Activity:**

gauges (start vehicle and check all gauges)

**4. Trailer Inspections**  
(FIG. 3)

- a. Be sure boat is properly secured to trailer via winch cable and reinforced bow eye.
- b. Winch operable and all wiring present
- c. Tire inflation, bearings and lugs check
- d. Pintle hitch and safety chain check
- e. Lights and reflector check
- f. Damage if any to trailer
- g. Manual crank check alternative check and location of same
- h. Spare tire check

**II. Hook-up and Tow**

**A. Hook-up Procedure**

1. Back up tow vehicle hook to hitch on boat trailer and align trailer pintle hitch with tow vehicle pintle hook assembly. STOP approximately 1' from trailer and place tow vehicle in park, emergency brake on.
2. Check positioning of pintle hook and hitch and adjust trailer's front jack stand as necessary to allow hook assembly to fit into trailer hitch.
3. Chock trailer wheels and back up tow vehicle hook into trailer hitch.
4. Close latch on hitch and lock in

DAILY INSPECTION CHECK LIST

BOAT TRAILER

TRAILER DAMAGE

NOTE:

\_\_\_\_\_

\_\_\_\_\_

TIRE TREAD SATISFACTORY \_\_\_\_\_

TIRES INFLATED \_\_\_\_\_

SPARE TIRE TREAD/INFL. \_\_\_\_\_

WINCH OPERABLE AND ALL  
WIRING INTACT \_\_\_\_\_

PINTLE RING SECURE \_\_\_\_\_

SAFETY CHAINS \_\_\_\_\_

EMERG. CHAINS \_\_\_\_\_

CASTER JACK \_\_\_\_\_

MANUAL CRANK \_\_\_\_\_

TRAILER LIGHTS \_\_\_\_\_

PERFORMED BY \_\_\_\_\_ DATE \_\_\_/\_\_\_/\_\_\_

CREW CHIEF SGT. \_\_\_\_\_

place.

5. Insert safety pins in latch.

6. Attach dual safety chains to tow eyes, crossing over each other and twisting if necessary to prevent dragging. ("X" pattern)

7. Plug electrical jack for trailer lights into provided socket on tow vehicle.

8. Plug electrical jack for the winch into the provided socket on tow vehicle.

9. Check winch cable connection to bow eye on boat. The line should be tight and have no slack in it.

10. Be sure safety cable is attached and break away chains.

11. Fully raise trailer front jack stand and remove trailer chocks.

#### B. Tow Procedure

1. Check all items listed above if tow vehicle is connected prior to towing;

- hitch latched and safety pin in place
- safety chains in "X" pattern
- All wiring attached
- tongue support fully raised

2. Prior to entering tow vehicle walk around tow vehicle and trailer and inspect all tires for obstructions, such as wheel chocks, and disconnect electrical cord to battery charger and from the AC source and check outboard engine supports for proper ground clearance.

3. Start tow vehicle engine, adjust

Instructor Notes:

Content Activity:

mirrors and seat as necessary and observe instrument gauges for abnormal indications.

4. Communicate desired route to launch site to Police desk and Ground control.

5. Drive tow vehicle and trailer to about 5 mph and test brakes.

6. Drive to boat launch site and observe all aeronautical rules and regulations ( call for clearance and obtain approval prior to crossing any runways ).

7. While driving always maintain a safe distance between the tow vehicle and any vehicle in front of it as follows;

- The distance between the tow vehicle and a vehicle in front of it is increased by two(2) car lengths at normal speeds.

- Double this distance at higher speeds.

8. Swing wide on all corners and slow down prior to turning.

9. Gently brake at all times to prevent trailer sway and or jackknife.

10. Avoid sudden starts and stops to prevent jackknifing.

11. Watch the wind and be prepared for sudden wind changes and jet blast, remember you are driving on an aeronautical area.

**NOTE:** The indicated driving precautions apply to clear and dry conditions. Always exercise extreme caution during inclement weather conditions.

**C. Practical Exercise**

**1. Demonstration-** Instructor to demonstrate proper hook-up, inspection and tow of vessel.

**2. Trainee Practical-** Each trainee to hook-up, inspect and trailer vessel to various launch sites on the AOA.

a. Instructors to test trainees knowledge of aeronautical area and radio procedures.

b. Instructors to demonstrate proper backing techniques and observe trainees do same.

**III. LAUNCH AND RECOVERY PROCEDURES:**

**A. LAUNCH PROCEDURES**

1. Launch Site Inspection- Upon arrival at any one of the designated launch sites the following checks will be made at the ramp area;

a. Ramp area is free of debris and/or other obstructions which may preclude launch.

b. Degree of slope

c. Surface of ramp

- snow and ice

- oil deposits

- wet and slippery

**NOTE:** Trainee's must be aware that very often the boat ramp may be slippery due to mold and algae growth on the surface of the ramp even if weather conditions are clear and dry.

Accordingly, always exercise extreme caution when walking and Trailering on the ramp area to avoid personnel injury.

d. Depth of water at end of ramp

2. Backing Trailer On Ramp-At least two persons are needed to back the rescue vessel down ramp as follows;

a. Driver

1. The driver should position trailer to back down ramp and commence same when tow vehicle and trailer are properly aligned.

2. While backing down ramp the

**Instructor Notes:**

**Content Activity:**

driver should grasp the steering wheel with one hand at the lowest point (6 o'clock position) and move his or her hand to the left to move the trailer left and right to move the trailer to the right.

3. Stop the trailer several feet from the edge of the water in order to prepared the vessel for launch.

4. Place transmission in park and apply emergency brake.

b. Guide

1. The guide should direct the driver down ramp and indicate right and left adjustments as needed.

2. Direct driver to stop when several feet from water's edge.

3. Chock wheels front wheels of tow vehicle before driver exits vehicle.

**3. Launch Preparation**

a. Secure both drain plugs in boat.

b. Remove tie downs to trailer when applicable

c. Operator to climb aboard and;

- put on P.F.D.

- turn on both engine batteries

- depress power on solenoids

- raise motors

- lower both engines

- prime both VRO engine oil

systems via two (2) primer bulbs

- prime engine fuel system via two (2) primer bulbs

#### 4. Vessel Launch

a. Remove wheel chocks and back trailer into water until the transom is afloat.

b. Stop tow vehicle, place transmission in park, emergency brake on and front wheels chocked.

c. Start both engines

**NOTE:** see engine start procedure

d. Detach safety cable and turn winch out to lower boat into water. Detach winch cable and apply reverse engine power to slide boat off trailer.

**NOTE:** At least one engine must be operating before disconnecting winch cables.

## B. RECOVERY PROCEDURES

### 1. Trailer Positioning

a. Back trailer down ramp and place transmission of tow vehicle in park, emergency brake on, and chock front wheels.

b. Boat operator to maneuver vessel onto trailer's roller assembly. It may be necessary to tilt motors on approach to trailer to avoid propeller damage.

**NOTE:** when tilting motors on ap-

**Instructor Notes:**

**Content Activity:**

proach to trailer be sure a steady water stream is visible, otherwise engine overheating and/or damage may result.

c. Extend winch cable to bow eye of boat and attach same.

d. Shut engines off and tilt upward.

e. Rewind winch cable via selector to winch " IN ".

**NOTE:** When winch is pulling boat up roller assembly all personnel should be clear of area directly behind winch to prevent injury if cable breaks and recoils reward.

f. Attach safety line after bow of boat makes contact with rubber guard on trailer.

g. Remove wheel chocks and trailer boat to top of ramp (level area)

h. Remove drain plugs

i. Engage engine supports (fig 3)

j. Turn all switches "Off"

k. Perform pre-trailering inspection.

l. Return to garage for clean-up

**C. POST RECOVERY CLEAN UP**

1. Refuel 140 gal. tank

2. Check and fill 3 gal. oil tank

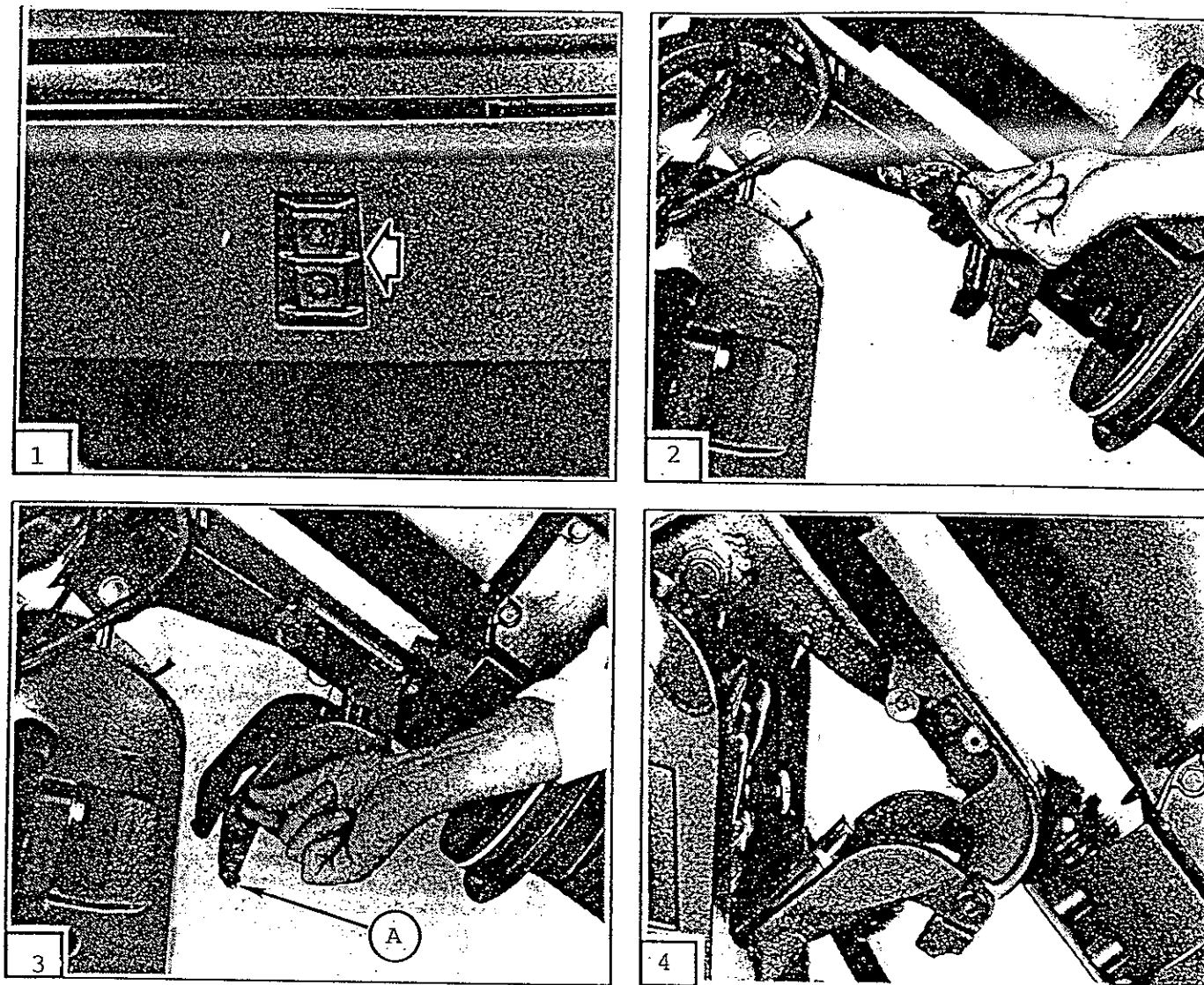
3. Flush motor (fig4 )

a. remove the plug from the water pump indicator.

b. connect a water hose to the flushing port and turn water on.

**NOTE:** Water pressure must be at least 20 psi.

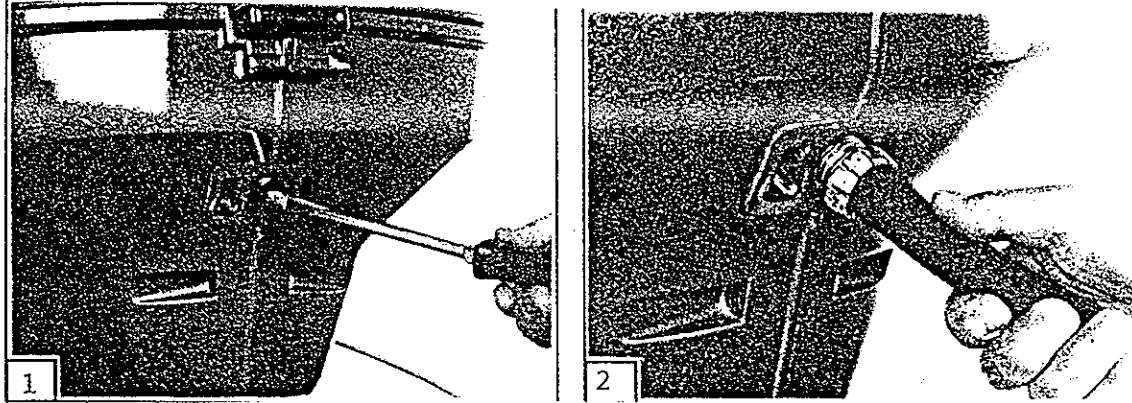
## TRAILERING BRACKET



1. Tilt motor fully .
2. Pull down trawling bracket.
3. A detent will hold the trawling bracket in position (A).
4. Lower the motor until the trawling bracket locks into place in the stern brackets.

(fig.3)

FLUSH THE MOTOR



NOTE: Water pressure must be at least 20 psi

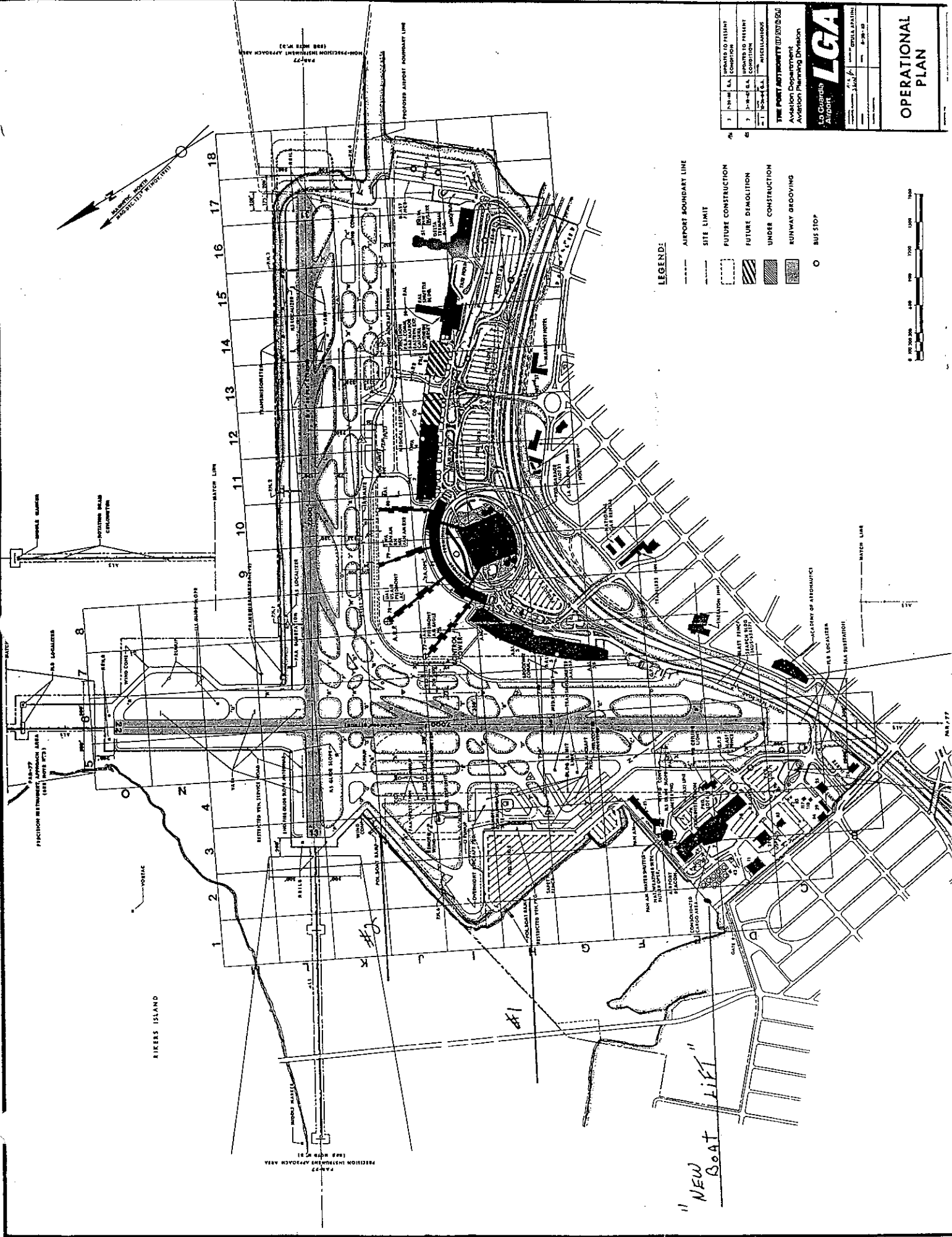
1. Remove the plug from the water pump indicator .
2. Connect a water hose to the flushing port. Turn water on.

(fig.4)

**Instructor Notes:**

**Content Activity:**

4. Wash down boat (tow vehicle - trailer) using fresh water and a mild detergent.
5. Stow all equipment
6. Complete tour inspection



1	1-1/2" x 1/2" C.A.	IMPROVED TO EXISTING CONDITION
2	1-1/2" x 1/2" C.A.	IMPROVED TO EXISTING CONDITION
3	1-1/2" x 1/2" C.A.	IMPROVED TO EXISTING CONDITION
4	1-1/2" x 1/2" C.A.	MISCELLANEOUS

THE PORT AUTHORITY OF NY & NJ  
 Aviation Department  
 Aviation Planning Division

**LGA**  
 LaGuardia Airport

- LEGEND:**
- AIRPORT BOUNDARY LINE
  - SITE LIMIT
  - FUTURE CONSTRUCTION
  - FUTURE DEMOLITION
  - UNDER CONSTRUCTION
  - RUNWAY GROOVING
  - BUS STOP



**OPERATIONAL PLAN**

RIKERS ISLAND

"NEW BOAT LIFT"

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LOCATIONS OF LAUNCH SITES JFKIA

PROCEED FROM BLDG. #269, CROSS R/W 13R AT TAXIWAY "P" TO THE SERVICE ROAD. ALL THREE (3) SITES CAN BE REACHED FROM THIS POINT.

SITE ONE

West launch site:

Located at Bergen Basin on the approach end of Runway 13R opposite the Bergen Basin sludge tank. At low tide, make sure trailer is on the concrete pad or it will sink into the mud.

SITE TWO

Center launch site:

This site is the center location, located on bay at taxiway L. Site two is located to the left of the old pier. This site is very narrow and requires careful maneuvering to set up boat for launch.

SITE THREE

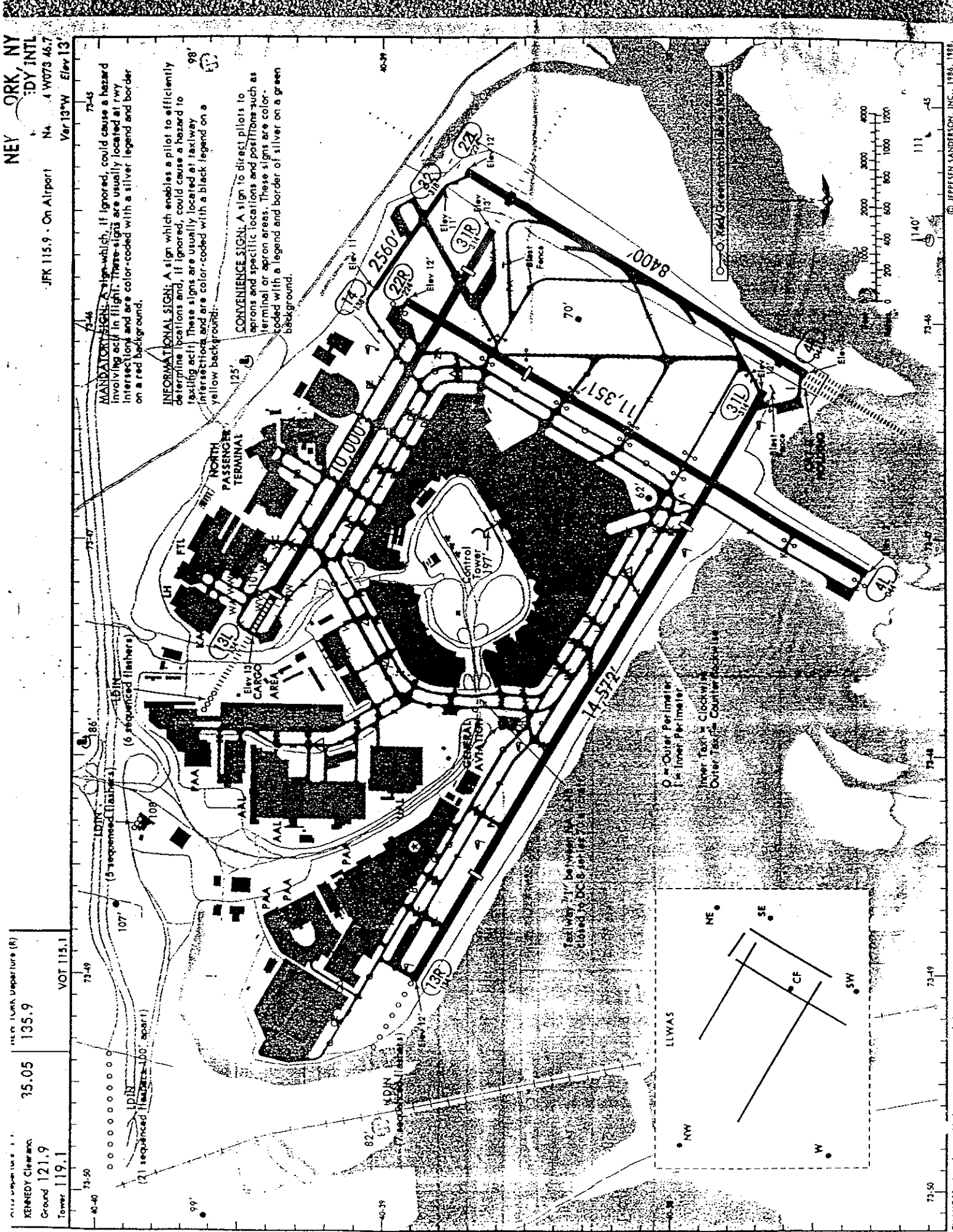
East launch site (best bet- can launch at any tide)

Site is located at Taxiway JA. The approach end of R/W 4R, to the left of pier.

note: Be alert for hazardous conditions at launch sites, are concrete filled.

NEW YORK, NY  
 J.F.K. INTL  
 JFK 115.9 - On Airport  
 Na. 4 W073 46.7  
 Var 13°W Elev 13'

KENNEDY Clearances  
 Ground 121.9  
 Tower 119.1  
 VOT 115.1  
 35.05  
 135.9  
 73-49  
 73-50

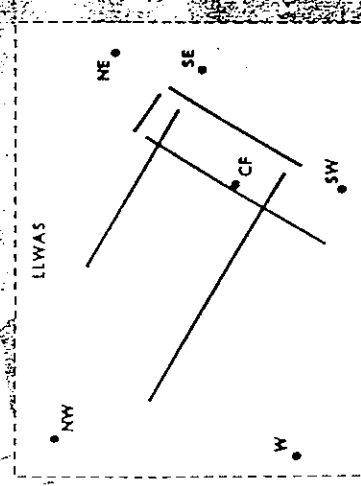


**MANDATORY SIGN:** Signs which, if ignored, could cause a hazard involving act in flight. These signs are usually located at rwy intersections and are color-coded with a silver legend and border on a red background.

**INFORMATIONAL SIGN:** A sign which enables a pilot to efficiently determine locations and, if ignored, could cause a hazard to (taxiing act). These signs are usually located at taxiway intersections and are color-coded with a black legend on a yellow background.

**CONVENIENCE SIGN:** A sign to direct pilots to aprons and specific locations and positions such as terminal or apron areas. These signs are color-coded with a legend and border of silver on a green background.

Fastway 11 between 11-351 and 11-352 closed to PCIL for taxiing.



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 CHANGES: Stop East added, Taxiway PV omitted.